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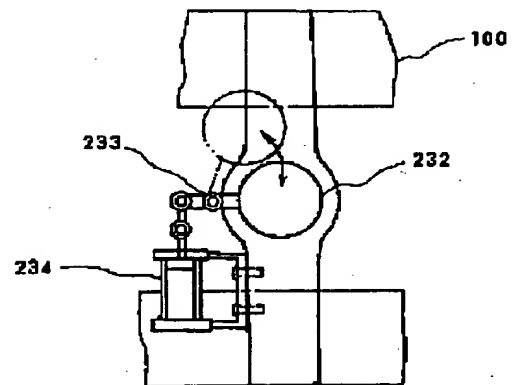
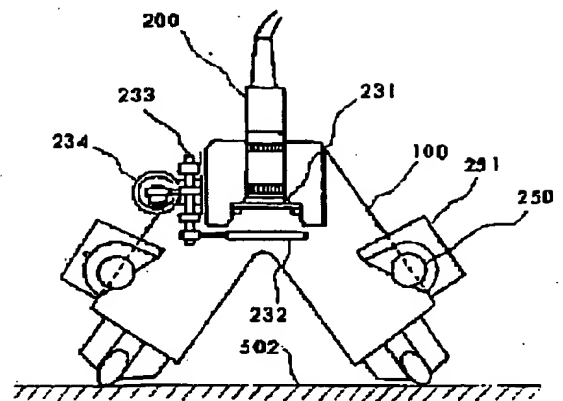
APPLICATION DATE : 18-10-91
APPLICATION NUMBER : 03270684

APPLICANT : HITACHI ENG CO LTD;

INVENTOR : KOMAKI KAZUSHI;

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TITLE : FLAW DETECTOR USING MAGNETIC PARTICLE



ABSTRACT : **PURPOSE:** To automate blow detection using magnetic particles by taking a structure wherein a hole is made in an iron core of a magnetizing apparatus and a TV camera for observation is embedded therein and by providing an ultraviolet-ray intercepting filter and a shutter in front of the camera.

CONSTITUTION: A TV camera 200 is fitted in such a manner that it is embedded in a hole made in the central part of an iron core of a magnetizing apparatus 100, and the camera 200 is always directed to the center of a testing surface 502. An illuminating lamp 250 applies an ultraviolet ray so that fluorescent light be generated from fluorescent magnetic particle and makes the camera 200 detect a defect. However, Part of the ultraviolet ray reflected on the testing surface reaches the camera 200 directly and covers a screen, so that other images can not be seen. In order to prevent this disadvantage, an optical filter 231 which transmits the fluorescent light generated by the magnetic particle, but intercepts the ultraviolet ray, is provided in front of the camera 200 and thereby the harmful reflected ultraviolet ray is intercepted. Besides, a shutter 232 for preventing the stick on a lens of the camera 200 of a splash of an inspecting liquid scattered on the testing surface 502 is driven by an actuator 234 to be opened and closed.

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